second VLAN ID is different from the first VLAN ID, and to forward the modified data packet from the first VLAN to the MAN.

2.   (Amended) The system of claim 1, wherein the second VLAN further comprises a third VLAN, and wherein the switch further to prevent the modified data packet from the first VLAN from being forwarded to the third VLAN.

3.   (Amended) The system of claim 2, wherein the switch to further maintain a forwarding data base (FDB) for the first, second, and third VLANs, wherein each FDB contains one or more media access control (MAC) address entries.

4.   (Amended) The system of claim 3, wherein the switch to maintain a FDB for the first, second, and third VLANs comprises the switch to add a new MAC address entry to the FDB for each of the first, second, and third VLANs when a new MAC address is learned from the first, second, or third VLAN.

5.   (Amended) The system of claim 1, wherein the switch further to receive from the MAN a second data packet having the second VLAN ID, to replace the second VLAN ID with the first VLAN ID, and to forward the modified second data packet from the MAN to the first VLAN.

6.   (Amended) The system of claim 1, wherein the first VLAN ID is obtained from a header encapsulating the data packet.

7.   (Amended) The system of claim 6, wherein the header encapsulating the data packet is an Institute of Electrical and Electronics Engineers (IEEE) 802.1Q frame tag.

8.   (Amended) The system of claim 1, wherein the second VLAN ID is obtained from a header encapsulating the data packet.

9.   (Amended) The system of claim 8, wherein the header encapsulating the data packet is an Institute of Electrical and Electronics Engineers (IEEE) 802.1Q frame tag.

10.   (Amended) The system of claim 1, wherein the first VLAN ID is obtained from an internal value stored in the switch.

11.   (Amended) The system of claim 1, wherein the second VLAN ID is obtained from an internal value stored in the switch.

12.   (Amended) A method comprising:

        receiving at a switch coupled to a metropolitan area network (MAN), a first virtual local area network (VLAN), and a second VLAN, a data packet from the first VLAN, the data packet having a first VLAN ID associated with the first VLAN;

        replacing the first VLAN ID with a second VLAN ID associated with the second VLAN, wherein the first VLAN ID is different from the second VLAN ID; and

        forwarding the modified data packet from the first VLAN to the MAN.

13.   (Amended) The method of claim 12, further comprising receiving at the switch from the MAN a second data packet having the second VLAN ID, replacing the second VLAN ID with the first VLAN ID, and forwarding the modified second data packet from the MAN to the first VLAN.

14.   (Amended) The method of claim 12, further comprising obtaining the first and second VLAN IDs from the data packet.

15. (Amended) The method of claim 12, further comprising obtaining the first and second VLAN IDs from internal values stored in the switch.

16. (Amended) The method of claim 12, further comprising preventing the data packet originating from the first VLAN from being forwarded to a third VLAN.

17. (Twice Amended) The method of claim 16, further comprising maintaining a forwarding data base (FDB) for the first, second, and third VLANs, wherein each FDB contains one or more media access control (MAC) address entries, and adding a new MAC address entry to the FDB for each of the first, second, and third VLANs when a new MAC address is learned from the first, second, or third VLAN.

18. (Twice Amended) An article of manufacture comprising:
a machine accessible medium including content that when accessed by a machine causes the machine to
receive at a switch coupled to a metropolitan area network (MAN), a first virtual local area network (VLAN), and a second VLAN, a data packet from the first VLAN, the data packet having a first VLAN ID associated with the first VLAN;
replace the first VLAN ID with a second VLAN ID associated with the second VLAN, wherein the first VLAN ID is different from the second VLAN ID; and
forward the modified data packet from the first VLAN to the MAN.

19. (Amended) The article of manufacture of claim 18, further comprising a machine accessible medium including content that when accessed by a machine causes the machine to receive at the switch from the MAN a second data packet having the second VLAN ID, replace the second VLAN ID with the first VLAN ID, and forward the modified second data packet from MAN to the first VLAN.

20. (Amended) A comprising:

a port for receiving a data packet from a first VLAN;

an assigner to assign a first VLAN ID to the data packet that identifies the first VLAN;

a verifier to verify that the assigned first VLAN ID matches a value stored in a memory of the switch;

a controller to control the processing of the verified data packet and to replace the verified first VLAN ID with a second VLAN ID that identifies a second VLAN; and

a forwarder to forward the modified data packet to the MAN.

21. (Amended) The switch of claim 20, wherein the assigner further identifies the second VLAN based on the contents of the data packet's source Internet Protocol (IP) address.

22. (Amended) The switch of claim 20, wherein the assigner to assign the first VLAN ID comprises the assigner to obtain the first VLAN ID from a header encapsulating the data packet.

23. (Amended) The switch of claim 20, further comprising a preventer to prevent the data packet from being forwarded to a third VLAN.

24. (Amended) The switch of claim 20, further comprising:

a second port for receiving a second data packet from the second VLAN, and wherein the assigner to assign the second VLAN ID to the second data packet that identifies the second VLAN, the verifier to verify that the assigned second VLAN ID matches a second value in the memory of the switch, the controlling to replace the verified second VLAN ID with the first VLAN ID that identifies the first VLAN, and the forwarder to forward the modified second data packet to the first VLAN.